

STATUS OF CLAIMS

Claims 8 – 14, 16, 17, 19, 25 and 27 – 34 are pending.

Claims 11, 12, 14, and 29 are withdrawn from consideration.

Claims 8 – 10 stand rejected.

Claims 1-7, 15, 18, 20-24 and 26 have been cancelled, without prejudice.

Claims 16, 17, 19, 25, 27, 28 and 30 – 34 are allowed.

Claim 13 is objected to.

Claims 35 – 40 are newly added.

REMARKS

Allowance of Claims

Applicants gratefully acknowledge the allowance of Claims 16, 17, 19, 25, 27, 28 and 30 – 34.

35 U.S.C. 102 Rejections

Claims 8 – 10 stand rejected under 35 U.S.C. 102(b), as being anticipated by U.S. Patent No. 4,576,487 to Conover, Jr. et al. Applicants traverse this rejection and respectfully requests reconsideration.

The Examiner contends with regards to Claims 8 - 10 that Conover, Jr. et al. disclose a microprocessor which is programmed to execute a correlative algorithm and which determines a modified resistive output for the temperature sensor.

Independent Claim 8 recites:

An interface for a monitor and a temperature probe including a temperature sensor comprising:

a logic circuit for determining a modified resistive output for the temperature sensor and

a means for providing the modified resistive output, wherein the means for providing the modified resistive output is compatible with the monitor such that the monitor can display a temperature that corresponds to the modified resistive output from the temperature probe.

(emphasis added).

"A claim is anticipated only if each and every element as set forth in the claim is found, either expressly or inherently described, in a single prior art reference." *Verdegaal Bros. v. Union Oil Co. of California*, 814 F.2d 628, 631, 2 USPQ2d 1051, 1053 (Fed. Cir. 1987).

Applicants respectfully submit that the Conover, Jr. et al. reference does not teach or suggest a logic circuit which determines a modified resistive output, nor does it teach or suggest a means for providing the modified resistive output.

In contradistinction, the microprocessor of Conover Jr. et al simply computes the resistance of a thermistor based on voltages of two channels of an analog-to-digital voltage converter. See Col. 12, lines 22 – 30; Col. 11, lines 31 – 36. This microprocessor then converts this computed resistance to a corresponding temperature reading. The temperature reading of Conover Jr. et al is then transmitted to a display device for display. See Col 12, lines 26 – 30. There is simply no teaching in Conover Jr. et al of determining a “modified resistive output” as claimed in present Claim 8 and, hence, clearly no teaching or suggestion to “provide the modified resistive output” to a monitor as further recited in the present claim. The logic circuit of the present invention, on the other

hand, by determining such modified resistive output, and the further means for providing the resistive output, advantageously allows for compatibility with a peripheral electronic device or monitor for displaying a temperature that corresponds to the modified resistive output.

Furthermore, in one instance, the logic circuit may correlate a measured temperature with a temperature such as internal body temperature or core body temperature, when the thermistor is being used to measure skin or temporal temperature. See Specification, Para. [0014], lines 7 – 9. In another instance, the logic circuit which may include a microprocessor, may use a predictive algorithm to convert a temperature taken shortly after the thermistor is placed, i.e. during a period of thermal instability, to a final predicted temperature before the thermal stability actually occurs. See Specification, Para. [0014], lines 8 – 11.

Thus, in such embodiments the present invention modifies an output of a temperature sensor and then transmits a modified resistive output to a display device. The modified resistive output is received by a monitor which then converts the modified resistive output to a corresponding temperature and displays the temperature.

The microcomputer of Conover Jr. et al. simply converts a computed resistance to a corresponding temperature reading and transmits the sensed temperature reading to the display driver. See Col. 12, lines 26 – 30. Whereas, the logic circuit of the present invention modifies the resistive output from the temperature sensor, determines a

temperature value, (which may or may not be different from the temperature sensed by the temperature sensor) and transmits a modified resistive output corresponding to the determined temperature to the monitor. Such modified resistive output thereby allows for a monitor to detect this output and advantageously convert the modified resistive output to the correct temperature. See e.g. Specification, Paragraph [0013]. For all of the foregoing reasons, the circuit and system of Conover Jr. et al. does not anticipate the invention as recited in present Claim 8. Reconsideration and removal of this 35 U.S.C. 102(b) rejection of Claim 8 is respectfully requested.

Dependent claims 9 and 10 depend from patentably distinct independent Claim 8 and are likewise patentable for at least the foregoing reasons. Reconsideration and removal of this 35 U.S.C. 102(b) rejection of Claims 9 and 10 is respectfully requested.

Objection of Claim 13

Claim 13 is being objected to as being dependent upon a rejected base claim. The Examiner indicates that Claim 13 would be allowable if rewritten in independent form including all of the limitations of the base claim. As set forth above, base Claim 8 is patentably distinct. Claim 13 depends from Claim 8 and is likewise patentable. Reconsideration and removal of this objection to Claim 13 is respectfully requested.

New Claims 35 – 40

Applicants have added new Claims 35 – 40 to further clarify and define aspects of the invention. Claim 35 is supported by the specification, which states in relevant part: “the temperature that is measured by the probe is converted to a resistance output ... that corresponds to a modified or corrected reading that the clinician desires to monitor.”(emphasis added) See Paragraph [0014]. See also Paragraph [0006] (“[i]n another embodiment, this invention allows the resistive output of a temperature probe to be modified to reflect other corrections and adjustments...”). One example may be while the probe measures the skin or temporal temperature, the clinician may desire to measure the internal body or core body temperature. Independent Claim 40 is also supported by the specification. See Specification, Paragraph [0014]. Accordingly, no new matter has been added by this amendment.

Newly added independent Claim 35 recites:

An interface for a monitor and a temperature probe including a temperature sensor comprising:

a logic circuit responsive to a first resistive output from the temperature sensor, said first resistive output being indicative of a first temperature, said first temperature being sensed by the temperature sensor, said logic circuit adjusting said first resistive output to form a second resistive output, wherein said second resistive output is indicative of a second temperature; and

a means for providing said second resistive output, wherein the means for providing the second resistive output is compatible with the monitor such that the monitor can display said second temperature.

As discussed above with regards to Claim 8, Conover Jr. et al. teaches a system which converts the resistance of a thermistor to a corresponding temperature reading and transmits this to a display device. Conover, Jr. et al. neither teaches nor suggests a system which modifies a resistive output to form a second or modified resistive output, and where the modified resistive output is transmitted to a display monitor, which monitor then converts the modified resistive output to a temperature reading. As Claim 35 recites specific features and functionality neither taught nor suggested by the cited references of record, allowance of new Claim 35 is respectfully requested. Newly added dependent claims 36 – 38 depend from independent claim 35 and recite additional features neither taught nor suggested by any cited reference of the record.

Newly added independent claim 40 broadly encompasses the above-discussed features of the present invention and recites:

An interface for a monitor and a temperature probe including a temperature sensor comprising:

a first circuit responsive to said temperature sensor for obtaining a digital signal indicative of a sensed temperature;

a second circuit, said second circuit receiving said digital signal from said first circuit, said second circuit forming a resistive output based on said digital signal, wherein said resistive output is indicative of a temperature determined by said second circuit; and

a means for providing said resistive output, wherein the means for providing said resistive output is compatible with the monitor such that the monitor can display said temperature.

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As discussed above with regards to Claim 8 (and Claim 35), Conover Jr. et al. neither teaches nor suggests a microprocessor which outputs a resistive output. Accordingly, allowance of new independent claim 40 is respectfully requested.

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CONCLUSION

Having addressed all outstanding grounds raised by the Examiner, Applicants respectfully submit the present case is in condition for allowance, early notification of which is earnestly solicited.

Should there be any questions or outstanding matters, the Examiner is cordially invited and requested to contact Applicants' undersigned attorney at his number listed below.

Respectfully submitted,



Edward J. Howard
Reg. No. 42,670
Plevy, Howard & Darcy, P.C.
P.O. Box 226
Fort Washington, PA 19034
(215) 542-5824
(215) 542-5825 (fax)

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